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JOINT COUNCIL ON FOOD AND AGRICULTURAL SCIENCES

Secretariat:
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U.S. Department of Agriculture
Washington, D.C. 20250

PROCEEDINGS OF THE
JOINT COUNCIL ON FOOD AND AGRICULTURAL SCIENCES
MEETING, OCTOBER 14-16, 1981
ARLINGTON, VIRGINIA

Joint Council Members and Alternates:

James H. Anderson, Cochairman
Anson R. Bertrand, Cochairman
A. R. Baldwin
Lark P. Carter
Mary E. Carter
K. Jane Coulter
Raymond T. Floate
John L. Gerwig
Mary Nell Greenwood
C. I. Harris
R. J. Hildreth
Dawson Johns
John P. Jordan
Terry B. Kinney, Jr.
John Lee
Denis Prager
Harold F. Robinson
Keith Shea
Richard A. Skok
George W. Sledge
Charles M. Smallwood
Samuel Waters
John G. Stovall, Executive Director
Susan G. Schram, Executive Secretary

Regional Council Representatives:

Signe Betsinger, Chairman, North
Central Regional Council
H C Cox, Chairman, Western Regional
Council
Gilbert Porter, Chairman, Northeast
Regional Council

Speakers:

Nyle Brady, Agency for International
Development
Garrey Carruthers, Department of
Interior
James W. Cowan, Office of Interna-
tional Programs & Studies, NASULGC
Elmer Kiehl, Board for International
Food and Agricultural Development
Mike Phillips, Office of Technology
Assessment
Joan Wallace, USDA/OICD

Others Present:

J. Lamar Beasley, USDA/FS
Charles Beer, USDA/S&E
Norman Berg, USDA/SCS
Alan Bird, USDA/ERS
Mark Buchanan, Western Director-at-
Large, State Agr'l. Exper. Stations
Gary Evans, USDA/S&E
William Farley, USDA/S&E
Walter L. Fishel, Ohio Agricultural
Research and Development Center
Barbara Fontana, USDA/S&E
Edward Glazener, North Carolina State
University
Bruce Greenshields, USDA/ERS
D. Mark Hegsted, USDA/S&E
Carol Johnson, USDA/S&E
Patricia B. Lewis, American Institute
of Biological Sciences
Robert Marshak, USDA/S&E
Connie McKenna, USDA/S&E
Le-Nhung McLeland, American Chemical
Society
Andrew Moore, Grocery Manufacturers
of America

c. Brochure to Increase Public Understanding of the Food and Agricultural Science and Education System

- The Executive Committee discussed a variety of proposals for such a brochure, as endorsed by the Joint Council Committee for Increasing Public Understanding of the Food and Agricultural Sciences.
- Discussion indicated the limited impact that a brochure of this type would be likely to have, and it was decided that this issue would be considered further at a later date.

d. Meeting with Secretary Block

- Prior to the Executive Committee meeting, the Cochairmen met with Secretary of Agriculture John Block to discuss various Joint Council-related issues.
- The Secretary reinforced the view of the Joint Council as his primary advisory link with the Science and Education community.
- Cochairman Anderson advised the Secretary that, in order to increase the Council's effectiveness, he will need to endorse its role with such groups as Experiment Station, Extension, and Resident Instruction Committees on Organization and Policy and the Council of Administrative Heads of Agriculture.

4. Report of the National Agricultural Research and Extension Users Advisory Board

- Ray Floate reported that the Users Advisory Board had met September 23-25. Its report will be released October 30, 1981.
- The report highlights global food and agriculture concerns and defines what the Board feels are "essential elements" of a food and agriculture science and education system in times of austere budgets.
- In the Board's view, "essential elements" of a core national science system include: (a) maintaining research, extension, and teaching as core components of a national agricultural science system; (b) applying priority setting and planning; (c) maintaining four program areas: (1) agricultural productivity, (2) agricultural economics, (3) natural resource conservation, and (4) human nutrition.
- The final section of the report identifies specific areas of concern which do not appear to be receiving adequate attention from the national research and extension organization. These include (in

alphabetical order): Animal Agricultural Productivity; Aquaculture; Cooperative Extension; Germplasm; Rangeland Management; Research and Extension Linkages; Transportation, Storage, Marketing, Processing and Distribution.

5. Budget Update

- Cochairman Bertrand reported that the FY 1983 Science and Education budget was presented to the Secretary on August 6; the Department budget was sent to OMB September 15.
- The President has submitted a revised FY 1982 budget to the Congress calling for a 12% reduction across the board for Science and Education by funding mechanism.
- Debate on the revised budget will continue after the Farm Bill is passed. A continuing resolution is now in effect authorizing expenditures at a rate not to exceed last year's figures, reducing where possible.

6. Report of the Standing Committee on Water

- Keith Shea reported that this committee held its first meeting on September 18.
- Members now include J. S. Robins, Washington State University, chairman; Keith Shea, Forest Service, USDA; Lowell Watts, Extension, Colorado State University; Marvin Jensen, Agricultural Research Service, USDA.
- The committee agreed initially to address two areas: (a) the adequacy of inventory data on ongoing research, extension, and teaching programs related to water and agriculture; (b) an assessment of the adequacy of evaluation and impact studies in the water area.
- The committee requested that the Joint Council bring the issue of data base adequacy in the water area to the attention of the Program Structure Study Group and to other committees studying the restructuring of information bases for research, extension, and higher education.

7. International Food and Agriculture Science and Education Programs

- Cochairman Bertrand explained that objectives of this session were to: (a) review the Joint Council's responsibility in this area; (b) review major issues and programs in technical assistance, scientific and technical exchange; (c) interact with the Agency for International Development, Board for International Food and Agricultural Development, International Science and Education Council, and Office of International Cooperation and Development; (d) determine if there are issues in the international area that the Council should further pursue.

- John Stovall explained that soon after its formation, the Council had considered the matter of its involvement in international program issues and decided to focus primarily on domestic problems but keep in touch with the issues and maintain a liaison relationship with the International Science and Education Council. The Council may want to reexamine this decision.
- a. BIFAD - Where It Has Been and Where It Is Going - Dr. Elmer Kiehl, Executive Director, BIFAD
 - Dr. Kiehl reinforced the importance of a partnership between BIFAD and the partners represented on the Joint Council.
 - The U. S. has a long history of involvement in providing technical agricultural assistance abroad and is viewed as a reliable source of assistance.
 - The best data base on foreign countries anywhere in the world is that of the USDA (vs the World Bank, FAO, etc.).
 - In general, Congressional direction has indicated that BIFAD should concentrate on building the institutional capacity and human resources of foreign countries in a manner suiting their historical, cultural, and political traditions.
 - AID must work with universities in a cooperative manner. Resources available are small, yet the tasks to be done are difficult.
 - A primary goal of BIFAD continues to be the institutionalization of a continuing Federal/State partnership.
 - This is difficult, given rapid turnover in AID and USDA personnel and a decline in U. S. university interest.
- b. International Science and Education Council (ISEC) - Progress Report and Issue Highlights - James W. Cowan, Director, Office of International Programs and Studies, NASULGC, and Staff to ISEC
 - Dr. Cowan explained that recent events had influenced the development of ISEC and of the Federal/State Partnership in the international area: (1) Title XIV legislation, Section 1458, provided the mandate for USDA's involvement in international activities; (2) Congress allocated funds for staff support to ISEC; (3) The USDA/China agreement stipulated that ISEC would coordinate scientific changes under this agreement; (4) USDA's Office for International Cooperation and Development (OICD) was formed.

- ISEC is cochaired by Dr. Ed Legates, Dean of Agriculture, North Carolina State University, and Dr. Joan Wallace, Administrator, OICD, and includes a number of working committees. Cowan and George Waldman, USDA, serve as staff to the group.
 - Accomplishments of ISEC in the recent past include: (1) a 1981 National Training Conference; (2) extension of university involvement in bilateral scientific exchange programs; (3) continued support of linkage programs with universities; (4) formation of the Portugal advisory committee; (5) drafting of a new ISEC/USDA cooperative agreement renewing the partnership and expressing the intent for cooperation.
 - Cowan identified issues for consideration by both ISEC and groups like the Joint Council which include: (1) involving the private sector in international development; (2) training of human resources; (3) orienting exchange programs toward basic mutual interest research programs; (4) continuing improvement of the AID/USDA relationship; (5) involving scientists from non-Land-Grant universities; (6) increasing U. S. understanding of the importance of international involvement.
- c. Overview of AID Policy Issues in Food and Agriculture Science and Technology - Dr. Nyle Brady, Senior Assistant Administrator, Head, Bureau of Science and Technology.
- Dr. Brady highlighted the world need, each year, for food to feed an additional 8 million people. Given no change in the growth of population, we will have 8 billion to feed by 2020. Countries will need to increase their self-sufficiency in agriculture.
 - In the 1950's, USAID held a short-term approach toward assisting other countries. There was limited research involvement overseas since this would involve a longer term time investment.
 - In contrast, programs sponsored by the Ford and Rockefeller Foundations would not accept shorter than a 15-year research investment, recognizing the time required to develop new technologies and varieties.
 - Past AID programs also were focused on extension activities, with the belief that the U. S. had all the necessary knowledge and only needed to extend it to others.

- A popular program in the 1950's was one of "institution building," i.e., U. S. universities helping to develop a sister institution overseas. In India, for example, most of the leaders in agriculture today have been trained at these universities.
- The decision was eventually made to terminate this type of program and to contract with other than university specialists to carry on the development process. AID personnel became general contracting managers.
- USAID now hopes to return to a transfer-of-technology approach vs "pumping dollars" into countries.
- Brady will be responsible for a central science and technology bureau with the directors of regional bureaus (Near East, Africa, Latin America, Asia) serving as associate members of this bureau. It is hoped that this approach will increase interaction with the now autonomous regional centers.
- AID hopes to develop longer term relationships with universities, look to universities for technical expertise, and reevaluate its relationship with USDA regarding training.
- Brady feels strongly about the importance of science and technology and that agricultural technology is still inadequate to meet world need.

d. Office of International Cooperation and Development - Program Highlights and Direction for the Future - Joan S. Wallace

- Dr. Wallace informed the Council that the Secretary of Agriculture is authorized to carry out international development and cooperation activities under the authority of Section 1458 of the Food and Agriculture Act of 1977, P.L. 480 legislation, the Foreign Assistance Act, and/or other legislative authorities. These activities include the coordination and administration of U. S. agriculturally related programs in international development, providing technical assistance and training to developing countries, and research and scientific programs under foreign currency programs.
- The Office of International Cooperation and Development (OICD) was created in 1978 to coordinate the international development programs of USDA. The responsibilities of OICD

were expanded in 1979 to include responsibility for international cooperative research and development with developing and middle income countries. OICD was also provided with budgeted funds by Congress to develop and carry out scientific exchange and research programs on its own.

- OICD's largest and best known international research activity is the Special Foreign Currency Research Program (SFCRP). Under this program the USDA uses "excess" foreign currencies to support agricultural and forestry research on problems of mutual interest to the United States and participating foreign countries. Since its inception in 1958, over 1,800 projects have been negotiated in 32 countries. The current value of the SFC program is about \$125 million equivalent in foreign currency. Grant proposals must originate with host-country scientists and must be approved by USDA scientists before funds are provided. For each grant, a USDA-cooperating scientist is appointed to provide for scientist-to-scientist exchanges.
- Much of the assistance provided by USDA in developing countries is provided through the Agency for International Development (AID). USDA has traditionally assisted AID to carry out technical assistance and training programs in developing nations. During the past year, OICD had 144 agreements with AID, international organizations, and developing countries to provide technical assistance in over 50 countries so that countries may become more self-reliant in producing food and fiber.
- OICD's Scientific and Technical Exchange Division directs the Department's exchange programs with foreign governments and institutions. Priorities for such exchanges are established by OICD and coordinated with agencies in the Department. Exchanges were carried out last year with 25 countries and involved almost 400 scientists -- one third of whom were from universities and the private sector. Activities with the Peoples Republic of China, for example, that generated tangible benefits included the soybean and medicinal germplasm exchanges -- the former giving the US-side wild cultivars for breeding new varieties and the latter will provide medical science with new source material for fighting cancer.
- USDA/OICD training programs for AID focus on human resource development and institution building. The training programs are in response to the steadily growing demand for increased skills and knowledge required for agricultural and rural

development in developing countries. These training programs were carried out both abroad and in over 80 U. S. universities, several USDA agencies, and in many private sector organizations.

- OICD's International Organizations Affairs Division maintains working relationship with United Nations' agencies and other organizations involved in international agriculture.
- OICD works through the International Science and Education Council (ISEC) to strengthen relationships with universities.
- OICD believes that the advice of the Joint Council on Food and Agricultural Sciences would be valuable in determining the positions or policies USDA should take toward joint research, higher education and other international cooperation and development programs.

Discussion

- H. F. Robinson highlighted the great need for personnel in the international area and advocated greater involvement of the Joint Council.
- Joan Wallace cited the desire of OICD to be represented on the Council.
- A. R. Baldwin encouraged resource persons to increase interaction and explore opportunities with the private sector.
- R. J. Hildreth encouraged the involvement of various international societies.
- Signe Betsinger questioned the extent of home economics involvement in ISEC.
- Wallace and Cowan explained that international bureaucracies, i.e., Ministries of Agricultural Affairs to which ISEC relates, usually do not have a home economics component.
- Dawson Johns suggested that the U. S. be exemplary in this area and include a home economics component in ISEC.
- Clare Harris suggested calling on Regional Research Committees to be aware of international opportunities available through OICD.

8. Joint Council "Self-Assessment"

- Cochairman Anderson stated that, following three years of activity, it was felt the Council should reflect on the effectiveness of its activities and chart a course for the next year and beyond.

a. Summary of Questionnaire Results - Gary Evans

- Gary Evans, Joint Council staff, explained that a questionnaire was sent to Joint Council members to facilitate this process. Of 24 members, 13 responded.
- Respondents evaluated the Council on progress in each area stipulated by Title XIV legislation and made suggestions for improvement. Legislative responsibilities and Council evaluation of its effectiveness are listed below:

I. Providing a forum for interchange of information

EvaluationEffective

70%

Very Effective

40%

Somewhat Effective

10%

Suggestions: (1) newsletter for Joint Council members; (2) undertake a new "project"; (3) more panel discussions to allow expression of plans or concerns of Joint Council partners; (4) long-range planning for Joint Council meetings; (5) more priorities analysis.

- II. Analyze and evaluate the economic, environmental and social impacts of agricultural research, determine high priority agricultural research areas, and submit annual reports identifying such high priority research areas.

EvaluationEffective

30%

Somewhat Effective

70%

Suggestions: (1) more priorities analysis; (2) activate the Joint Council regional councils and national functional committees to take over more of this responsibility; and (3) make priority statements with funding recommendations so that they can be used by the Secretary.

- III. Develop and review the effectiveness of a system, for use by the Secretary, of compiling, maintaining, disseminating information about federally supported agricultural research and extension projects.

Evaluation

Effective

70%

Somewhat Effective

20%

Suggestions: (1) activate the common program structure and streamline information systems; (2) broaden the Joint Council's perspective of other agencies and seek evaluation by others; (3) inform the Joint Council on the CRIS system and other information systems.

- IV. Assist in carrying out the Secretary's responsibilities through planning and coordinating efforts in food and agricultural sciences; develop an effective system of regional and national planning; develop recommendations and reports describing current and long-range needs, priorities, and goals in the food and agricultural systems.

Evaluation

Effective

60%

Somewhat Effective

30%

Suggestions: (1) provide a better understanding to the Joint Council of how the science and education system really works; (2) deal more in the realm of policy at the Joint Council level and integrate regional councils and national functional committees and the committees on policies into a more unified activity.

- V. Develop and review the effectiveness of guidelines for the competitive grants program.

Evaluation

Effective

30%

Somewhat Effective

30%

Very Effective

20%

Unsure

20%

Suggestions: conduct annual review of the guidelines.

- VI. Prepare and submit to the Secretary a statement of recommendations including a summary of accomplishments during the year and recommendations to be implemented during the following year.

Evaluation

Wide variety of response.

Suggestions: have the Joint Council develop recommendations, not staff groups; include recommendations on respective roles of segments of agricultural research and extension that should be recognized and make sure that there is adequate coordination with other Title XIV reports.

- Members listed the following as reasonable expectations for the Joint Council in the next 12 months: (1) assure that adequate communication is maintained with the Office of the Secretary; (2) improve communication between the JC, S&E agencies, and primary leaders at the non-Federal research and education organizations (universities, agricultural experiment stations), the Congress and the Office of the President; (3) focus on establishment of longer range planning priorities.
- Members felt that Regional Councils should be encouraged to provide more coordination and to continue various current efforts and activities in support of the Joint Council.
- Respondents felt that the most significant Joint Council accomplishments included: interpersonal development as Council members became more acquainted; publication of the program priorities report; establishment of Regional Councils and National Committees.
- Council members favored more direct contact with the Secretary; improvement of the Joint Council decisionmaking process; more stability in the long-term agenda for Regional Councils and National Committees.
- Forty percent of members felt the Council fulfilled its responsibility at least 75 percent of the time; 30 percent felt the Joint Council fulfilled its responsibilities 25 percent of the time.

b. Contributions of the Joint Council to Date - R. J. Hildreth

- Hildreth reviewed the various reports prepared and issues addressed in the history of the Joint Council and its specific accomplishments in the past year.
- He cited that, given the nature and complexity of the Council's task, a major accomplishment may be that the partners are continuing to meet and interact.
- The American agricultural research establishment has been described as articulated and decentralized. It is articulated in that it is interrelated into a whole by various kinds of linkages. It is decentralized in that there is a dispersion of authority and function at the State and national level.
- Ruttan and McCalla both suggest that the research establishment is efficient in the allocation of research resources and that a highly centralized system would be less efficient in allocating resources to research. They argue the efficiency in the allocation of resources is strongly related to a decentralized articulated establishment which enables the users of agriculture research to put emphasis on those research areas that have relatively high payoff and preserves sufficient intellectual freedom for good research.
- This has led to a decline in the credibility and legitimacy with the political system. Reasons for this include: the failure of the USDA leadership in several administrations to agree on the value of research, and the failure of State and USDA establishment leadership to be mutually supportive before OMB and Congress.
- However, this decentralized system appears to the political system to be unplanned and uncoordinated. The perceived lack of planning and coordination, along with the growth in the research done by private firms, and the growth in the size of farms lead many to doubt both the objectivity and social usefulness of the output of the research establishment. Some view the system as having outlived its usefulness and believe it is now just another bureaucracy devoted to its survival.
- How can the establishment improve its credibility and legitimacy with the political system while retaining the efficiency and productivity of an articulated decentralized system? Several attempts at joint planning and coordination have been made. The USDA established the Agricultural Research Policy Advisory

Committee (ARPAC) in 1969. Its purpose was to provide planning and coordination between in-house USDA research and State Agricultural Experiment Stations (SAES) as well as private industry. The Food and Agriculture Act of 1977 contained provision for the Joint Council on Food and Agricultural Sciences with representation from performers of agricultural research, teaching, and extension.

- The accomplishments of these planning and coordination attempts have been modest. The major reason appears to be the incredibly complex interrelationship and competition between agencies and program areas.
- Perhaps what is called for is impossible, but some method of planning and coordination of agricultural research will have to be found. It should enhance and coordinate the contribution of the USDA, SAES and private industry as well as the non-Land Grant universities and the Land-Grant universities of the 1980's. The output of the planning and coordination efforts will have to be accepted by scientists from the basic and non-agricultural fields. It will have to relate to the national needs as perceived by the political system.
- In order for a voluntary planning model such as the Joint Council to be effective, the performers must agree on the urgency of the effort. If the system relied on the Joint Council for recommendations about funding, the performers would become urgent about the effort. They do not now view the Joint Council efforts as highly significant since they have other channels to the political system to obtain funding and programs. The alternative to the voluntary approach is a rigid, authoritarian position.
- In spite of the many stresses, there are no other public investments that yield as many beneficial returns as the food and agriculture science and education system.
- The following observations were made in discussion:
 - The most important role for Regional Councils in the future will be to raise issues for Joint Council consideration.
 - Perhaps we have been too pessimistic -- agriculture has a good record of support; expectations for the Joint Council may be unrealistic.

- Perhaps the Council should isolate one or two issues to bring to the Secretary's attention vs taking a broad brush approach.
- Would joint UAB/JC action serve to bring attention to key items more effectively?
- We must reach the point where the detractors in the system must agree that there is an advantage to coordination and presenting a united front for agriculture.

c. Unexploited Opportunities for the Joint Council - Denis Prager

- Dr. Prager identified his personal support of the agricultural research community and its productivity.
- Agriculture is more important than ever domestically and internationally. At the same time, the challenges to agriculture are more severe (i.e., availability of cost of inputs; decreasing numbers of farmers; water, energy, land availability and prices).
- Are institutions in a position to meet these challenges? As resources have decreased, institutions have become protectionist and begun fighting among themselves. Political implications and changes have been ignored.
- The Joint Council should provide an objective overview of the system to determine whether the nature of its outputs are consistent with the nature of challenges facing American agriculture.
- The Council should identify the challenges facing agriculture, goals to meet those challenges, strengths and weaknesses of the various components of the system and opportunities for cooperation and coordination.
- Rather than zeroing in on specifics, the Council should address such broad cross-institutional issues as: (1) overall adequacy of the agriculture science base; (2) adequacy of information and technology transfer; (3) expectations for the system -- how can we protect it? (4) role of USDA in overseeing Cooperative State Research and Extension Programs; (5) role of Agricultural Research Service programs.
- The Council should discuss provocative national issues and take on difficult problems and questions during its meeting, not

merely respond to staff work. It should then provide the Secretary with the information that is essential for the survival of the system.

d. Challenges Ahead for the Joint Council - J. P. Jordan

- Dr. Jordan highlighted the following indications of impending serious problems for agriculture:

Water - worries about water quality and quantity are increasing, especially in States west of the 100th meridian where most meaningful agriculture requires irrigation.

Land and Land Use - world population continues to grow, yet topsoil is being lost at the rate of 11 tons/acre/year and prime agricultural land is being converted to other uses at a rate of four square miles per day.

Credit - 1981 farm income will be the worst in nearly two decades. The need for credit has gone up and interest costs are at 19 percent. Do small farms have enough equity against which to borrow?

Energy - energy and interest are competing as the principal costs of running a farm.

Marketing - People external to USDA (Secretary of State, Federal Reserve Board) are "calling the shots" in the agricultural marketing area. America no longer sells within its own market environment alone.

- Amidst these trends, is it not time for us to research new structures, new mechanisms and new relationships between government and producers? Who else but the research, extension and teaching community is best geared to examine new options?
- Areas in which we can contribute include:
 1. Water and Water Law: Is the crunch for new water, particularly in the Western United States, so great as to require importing water, not only from Basin to Basin, but from Canada? If more water were brought to the region west of the 100th meridian, the resulting economic strengthening and increased productivity of America would be astonishing! And its cost? Surely less

than the new package for defense sent to the Congress for the MX missile and the Trident submarine.

2. Land and Land Use: How about bringing marginal land into production? If marginal lands were brought into production, what would we have to do to keep them from eroding away as rapidly as other lands? Could we move quickly to develop more effective, low-cost techniques for improving the carrying capacity of our rangelands? How about the idea of separating development rights from farming rights?
 3. Credit: Who shall have the power to set rates for the interest on loans? Will the Congress stand by and allow the Federal Reserve System to bring the family farm to its knees? Do we have some options, some new ideas and some new approaches to offer? On the related question of taxation, have we done enough research to show the effects of taxing farmland based not on market value but based on productivity...maybe on a 3-5 year average?
 4. Energy: The Secretary of Agriculture should be asked to reevaluate his agency's policy on the support of energy development and demonstration activities. We know a lot about producing our own energy on the farm, but we must show the farmer and rancher of America how to do it.
 5. Marketing: In the last couple of years, the wheat industry of America has organized itself into "U. S. Wheat Associates." It has vertically integrated itself, starting at the farmstead and ending up with a capacity to negotiate contracts at the ambassadorial and presidential level in foreign countries. Can a similar model be adjusted to fit other industries? Can we look toward a new partnership between the Departments of State and Agriculture, together with industry? Can we include the Congress and the White House in such a partnership? Who should take the leadership role in bringing about such an alliance?
- Money is tight, and that's all the more reason to be visionary and bold! It is time to stop rearranging the chairs on the deck of the Titanic and get about the business of steering the ship!
 - The success of America's agricultural research, extension and teaching system has been so astronomical as to tempt complacency.

- For us engaged in the management of agricultural research, extension and teaching, we must get the urgent message to the very fine brains that are a part of our system, that we deal directly with issues of war and peace, and of life and death. We must also get this message to the Congress, to the White House, and to every State legislature. The time is late.

e. Joint Council Agenda Items for 1982

- Action items suggested for 1982 as a result of preceding interactions include: (1) determine strategies for analyzing trends and needs even beyond the 21st Century; (2) exert bold Joint Council leadership and challenge the Regional Councils and National Committees to raise important issues for Council consideration; (3) assess expertise development - will we have the human expertise available to carry out our mission; (4) address what will be needed by the year 2000, and what does the food and agriculture science and education system need to do to get the job done; (5) agricultural productivity- how we will meet future world need; (6) examine duplication, improve efficiency, tackle top priorities in agricultural research and development; (7) do a five-year plan based on the common program structure, then expand to 10-20 years; (8) encourage Regional Councils to examine the linkage between research and extension programs.

9. During the luncheon session, Garrey Carruthers, Assistant Secretary for Land and Water Resources, Department of Interior, addressed the Council on the subject of water resources, a top Council priority.

- The cornerstone of DOI water policy is the assumption that water is essentially a State's right and that States must allocate and manage their water resources and take the leadership in this area.
- Carruthers believes the President's Cabinet Council on Natural Resources and Environment is a satisfactory vehicle to deal with many of these issues, and that an independent agency is not necessary -- water programs are the provinces of individual departments.
- Another big issue is cost sharing. Such activities as recreation, game and fish, are State responsibilities and should be State financed.
- Congressman Pashayan from California is introducing a bill dealing with financing water projects. Under this bill, cash to finance projects will come from the bond market. The Government will insure bonds, i.e., interest and repayment. This will force full cost recovery for water activities. This implies a higher cost for water than agriculture is now paying.

- Watt and Carruthers would like to start a new water project in any one of the 17 Western States in 1983. It has been five to six years since a new water project has been started in this country.
- Carruthers questioned the Council about what the Federal role in water research should be. The administration recommended zero funding for the Office of Water Research and Technology (OWRT). Congress disagreed and put the resources into the de-salinization program at OWRT. Carruthers feels this should be a private sector responsibility.
- Perhaps State water institutes should be funded on a matching basis for basic research to insure State commitments.
- Perhaps Federal water research should be assumed by the U. S. Geological Survey, DOI. They have the most researchers dealing in water and the best information system.
- A USDA/DOI task force is working on a joint approach to water problems and Carruthers advocated DOI representation on the Joint Council.
- Multi-State problems should be addressed under interstate compacts, not through Federal water law (an exception to this is in the area of Indian water rights). Water law differs greatly from State to State.
- Carruthers suggested that a top concern to the Joint Council should be the organization of water resources research in the Federal Government.
- Secretary Watt and Carruthers recommended zero funding in 1982 and beyond for the Water Resources Council (WRC). Heavy issues regarding water went the usual route -- through the Corps of Engineers, to the President, to the Congress, and the WRC was not meeting its charge.
- The Congress was unwilling to agree with zero funding for WRC until they had something else in place. Senate Bill 1095 (and similar House Bill 3432) proposes setting up an independent agency with representation from the various departments in government that have to do with water.

10. Assessment of Agricultural Science and Education Research Needs and Joint Council Five-Year Plan

- Proposed Title XIV legislation calls for the following reports:
(a) Joint Council Annual Priorities Report - (June 30); (b) Joint Council Five-Year Plan (June 30, 1983, with biennial updates); (c) Joint Council Annual Accomplishments Report (November 30); and (d) Research Needs Assessment (January 1, 1983).

- John Stovall explained that Congressman George Brown, who submitted the proposed needs assessment and five-year plan language in the Farm Bill, was invited to discuss his views on long-range planning with the Executive Committee at its September meeting. His basic ideas were as follows:
 - An assessment of food and agricultural needs to meet future U. S. and global demands is necessary to set research priorities.
 - This planning model should not be highly controlled and centralized, but must reflect, in its process, democratic goals.
 - It should include thoughts and perceptions from the brightest and best minds available.
 - The plan must be simple and functional - "enlightened horse sense" to look into the future and avoid disaster.
 - A long-range plan - at least five years beyond the budget cycle - is needed to define the strategies for achieving the future agricultural needs.
- The Executive Committee charged Bob Buckman with arriving at a process for completion of the Assessment and other reports called for in Farm Bill legislation.
- Keith Shea explained that, in response to the charge to Bob Buckman, a small task force had devised a process for completion of the Assessment and other reports.
- The committee proposal suggests that the Research Needs Assessment be expanded to encompass all of science and education. It would be primarily a synthesis of existing long-range projections, organized according to the common program structure recently adopted by the Joint Council, not to exceed 50 pages, and required staffing would be three-five staff years.
- The Five-Year Plan would develop from the Needs Assessment, identify long-term priorities with budget direction, include strong input from Joint Council partnership groups, be 40-50 pages in length, and require three-four staff-person years.
- The Joint Council Annual Accomplishments report would be a summary of the research, extension and teaching system as well as the accomplishments of the Joint Council and its substructure. It would be completed by Joint Council staff, be 20-40 pages long, and be organized around the common program structure.

- One permanent Joint Council committee would oversee the preparation of all of these reports. Its membership would include six-eight individuals including some with planning expertise and it would be cochaired by a Federal and a State Joint Council member. This group would be responsible for determining an effective way to get input from such groups as Joint Council Regional Councils and Committees, ECOP, ESCOP, RICOP, 1890 Schools, Home Economics, Veterinary Medicine, OSTP, AASCU, ASCUFRO, AAU, and Federal agencies, etc.
- Shea explained that, for the Needs Assessment, the Executive Committee had subsequently recommended an approach where a staff group would assimilate available information, then provide such a document to a "think tank" group of the best and brightest minds available to look into the future.
- Council discussion pointed to: (a) the desire to keep the Needs Assessment comparatively brief; (b) the need to effectively structure the process of obtaining information from Joint Council partners (i.e., specific instructions to Regional Councils, National Committees); (c) the need to look at social, political, and economic structure as well as the implications in the bio-sciences; (d) the desirability of involving players outside of the system, i.e., the State Department, etc., in the Assessment; (e) the need to inform and involve ECOP, ESCOP, and RICOP.
- It was moved, seconded, and passed that the Cochairmen should appoint an oversight committee to begin development of the Assessment and additional reports called for by the legislation.

11. Regional Council Updates

a. North Central

- Signe Betsinger, chairman, reported that the North Central Regional Council's next meeting will be held in January or February.
- Betsinger looks forward to concrete guidance from the Joint Council as to the part Regional Councils should play in the Needs Assessment.

b. Western

- H C Cox, chairman, reported that the Western Regional Council will meet October 30.
- The West also looks forward to the Assessment process.

c. Northeast

- Gilbert Porter, chairman, reported that the Northeast Regional Council met September 18 in Syracuse, New York, with Drs. Bertrand and Stovall in attendance.
- The Regional Council met back to back with the Northeast Regional Research Committee and toured the Agway research farm.
- NERC is particularly concerned with the animal health issue and the opportunities for coordination across teaching, research, and extension and among the Schools of Veterinary Medicine, Experiment Stations, Cooperative Extension Service and Resident Instruction. The dairy industry is number one in New York State but resources flowing to dairy, cattle, and animal health research are miniscule.
- Porter feels that the Council's entire structure for planning and coordination should be looking at long-range "big issues" and needs, and that State legislatures and the Congress should be apprised of those issues.

12. National Committee Updatesa. National Extension Committee

- John Gerwig reported that the National Extension Committee met September 24-25 in Dallas, Texas.
- NEC has chosen three areas of emphasis: energy, technology transfer, and research-extension linkages. Resource persons addressed energy and technology transfer at the September session, and a committee update was given on research-extension linkages.
- NEC adopted the following resolution regarding energy:

WHEREAS, there is a continuing need for the collection, evaluation, and dissemination of reliable information on the wise and efficient use of energy in all areas of economic and personal life; and

WHEREAS, numerous new developments are being pursued in the search for more efficient energy use in the production, processing, and marketing of food and fiber products and in rural homes; and

WHEREAS, there currently exists a high degree of uncertainty about the direction, financial support, and focus of outreach programs to provide reliable and timely information on improved

energy use and conservation in rural areas and agriculture; now, therefore, be it

RESOLVED, That the National Extension Committee recommends to the Joint Council on Food and Agricultural Sciences that financial support be provided and responsibility for energy extension related to agriculture and rural areas should reside within the United States Department of Agriculture; be it further

Resolved, That the National Extension Committee urges the Joint Council to lend its strong support to the development of a well-coordinated energy extension program within the United States Department of Agriculture to meet the urgent needs for assistance in agriculture and rural areas.

- The committee forwarded the following statement to the Council regarding technology transfer:

"The Committee wishes to advise the Joint Council that the National Extension Committee:

- (1) is familiar with, and recognizes the importance of the national study of technology transfer;
- (2) recognizes that the study of technology transfer is very broad in scope and encompasses a multitude of emphases, some of which are directly related to Extension and others which relate only tangentially, and;
- (3) is aware of the critical importance of the issue of technology transfer to the accomplishment of Extension's mission.

Accordingly, the National Extension Committee, through the Administrator of the Extension Service, plans to commission the development of a 'white paper' that would concern 'Aspects of Technological Transfer That Are of Particular Interest and Concern to Extension'."

- NEC is concerned about the recently established travel ceiling of \$3,000 available for its members in 1982. It has consulted with the Executive Committee about the possibility of additional travel support for 1982. The Executive Committee suggested that NEC meet twice vs quarterly and that all but lay members be asked to fund their own travel. Dr. Bertrand will confer with Dr. Greenwood about the possibility of finding other sources of travel support.

- The National Extension Committee hopes to meet back to back with the Joint Council in January.
- Motion passed to transmit NEC's energy resolution to Secretary Block.

b. National Higher Education Committee

- Edward Glazener, chairman, reviewed the Charter for the National Higher Education Committee.
- NHEC has appointed two workgroups: (1) Workgroup on Food and Agricultural Education Information Systems and (2) Workgroup on a National Assessment of Curricula in the Food and Agricultural Sciences.
- At its November 8 meeting the NHEC will hear reports from these two subcommittees and discuss priority areas of water, energy, and agricultural productivity.
- The Northeast Regional Higher Education Committee has transmitted two resolutions to the NHEC: (1) favoring a more permanent position in Science and Education's Office of Higher Education (vs IPA status) and (2) desiring a closer linkage on program and fiscal matters with vocational agriculture and home economics in the high school.

c. National Agricultural Research Committee

- Mark Buchanan, cochairman, reported that NARC met October 1-2. Issues discussed included:
 - (1) Basic Research - a committee was established to draft a report describing features of basic agricultural research.
 - (2) Technology Assessment - Burt Sundquist, University of Minnesota, reviewed progress in the pilot technology assessment of corn. NARC feels that the major audience for this and other technology assessments should be Congressmen and State Legislators. Sundquist will prepare a 20-page executive summary of the corn study for this purpose.
 - (3) Needs Assessment - the process for the proposed Needs Assessment was reviewed for NARC members by Keith Shea and its relationship to the technology assessment process discussed.

- (4) Regional/National Planning System - a subcommittee was established to draft a brief brochure describing the regional/national agricultural research planning process.
- (5) Travel Policy - NARC members will support their own travel costs and the \$3,000 allocated will support travel of resource persons.
- (6) Keith Huston was elected as new stateside cochairman of NARC.
- (7) The CRIS Committee of the Joint Council will become a subcommittee of NARC.

12. Technology Transfer

- Following further discussion of the technology transfer issue, the following resolution was submitted by Dawson Johns for transmittal to the Secretary of Agriculture:

WHEREAS, rapid development in electronics communications technology, along with increased use of computers and improved computer software packages provide an expanded opportunity for the delivery of information and educational programs direct to the farmer and homemaker; and

WHEREAS, pilot efforts are now underway testing the above communications systems, and increased ownership of mini and micro computers is likely to expand expectations by farmers and farm groups in this area; and

WHEREAS, entry of private industry into information delivery is increasingly apparent; and

WHEREAS, the Extension Service of the USDA is currently involved in efforts to evaluate the use of computers and other electronic communications technology as a means of improving communications with farmers and agribusiness firms; be it

RESOLVED, That appropriate offices of the USDA be commended for efforts, to date, in this important area of technology, and be it further

RESOLVED, That the USDA, in service to American agriculture, adopt and establish throughout the country for individual farm use as complete and state-of-the-art electronics communication system as possible.

- Motion carried that the Joint Council adopt the resolution and that staff will formulate correspondence transmitting it to Secretary Block.

13. OTA Assessment of U. S. Food and Agricultural Research

- Mike Phillips, OTA, reported that this study is now complete. The final report will be released October 30.
- The report was requested by Congress as a result of the concern about future needs for food and agricultural research and technology. Are public research institutions ready for the task ahead? Is long-range planning process adequate? What are the roles of the various participants?
- The report was compiled with input from a number of committees and panels representing expertise within the system.
- Report highlights include the following:
 - There seems to be a lack of expressed goals for the food and agriculture research sector. Many goals (productivity, etc.) are implied.
 - Decisionmaking seems to be done on an ad hoc basis with a lack of continuous long-range research planning.
 - Better coordination is needed throughout the system.
 - Benefits are well in excess of public costs of agricultural research. Increased Federal funding is warranted.
 - Roles of partners in the food and agricultural research system seem to overlap and in many cases have become indistinguishable.
- Phillips shared the concern that the food and agriculture science and education system as a whole needs an effective spokesperson. The Congress needs integrated information -- What are the problems? What agricultural research is needed to address those problems? What will be done? Which components of the system will accomplish it?

14. Program Structure Study Group: Update

- Walter Fishel, staff, reviewed the final study group report. The report delineates features of an integrated information system which would provide data within the context of the common program structure adopted by the Council in July.

- Assumptions underlying the development of such a system include:
 - (a) There is a great need to be able to describe research, extension, and education programs in a common language; (b) information, not control, is the objective; (c) this system would provide information on joint concerns of partners on the Joint Council; (d) program categories should reflect major policy issues addressed by the Council.
- Data elements of the information system would include: Inputs (dollars, personnel); Outputs (success stories); Performers (type, functional area); Delineating Categories (geographical location, fiscal year, discipline).
- Functional information systems currently in use (CRIS, EMIS, NARS, PARIS) would still be used by individual performers, but would crosswalk into an integrated information system. Success stories will be an additional element needed from individual systems.
- The report proposes a separate staff to maintain such a system.
- Five recommendations of the Program Structure Study Group include:
 - (a) The Program Categories adopted by the Council at its July meeting should include under Category IV "People and Communities," the additional subcategory "Youth Development."
 - (b) In developing a common program structure and supporting information system for food and agriculture research, extension, and higher education, the Joint Council should take whatever steps are necessary to promote understanding among all performers, organizations and agencies represented on the Joint Council of what an integrated information system is and is not.
 - (c) Prior to implementation of any designed system which is acceptable to the Joint Council, the system should be provided for review and comment to performers and appropriate policy groups including ECOP, RICOP, ESCOP, and ASCUFRO.
 - (d) Final definition of Program Categories and specification of crosswalks should be determined as the system develops.
 - (e) Because of differences in the nature of the data required by Food, Agriculture, and Nutrition Inventory (FANI), it is recommended that FANI data requirements be handled outside the proposed system.
- Discussion indicated concern about the cost of a special staff to maintain an integrated information system.

- Fishel suggested assigning a director and two staff (from current employees) to begin working on the details.
- The Council accepted the recommendation that "Youth Development" be added under the "People and Communities" program category, and members were invited to provide any additional input regarding program thrusts to George Sledge, Program Structure Study Group chairman.
- Dawson Johns requested that staff develop a brief justification of the need for an overarching information system vs adapting CRIS to meet these needs.
- The Council adopted the concept of incorporating a common program structure into information systems such as EMIS, NARS, PARIS, CRIS and the proposed Higher Education system.

14. 1981 Annual Report of the Joint Council

- R. J. Hildreth, chairman, Annual Report Committee, reviewed the initial draft of this report.
- An executive summary and an introduction explaining the food and agriculture science and education system will be added.
- The following review process will be used: (a) Regional Councils and National Committees will review the report by November 2; (b) a final draft will be available November 10 for Executive Committee review; (c) the report will be finalized by December 30.
- Departmental clearance procedures will be initiated immediately.

